Wet age-related macular degeneration (wet AMD) is a chronic, progressive eye disease that damages a portion of the retina called the macula. A healthy macula is required for clear central vision. The disease is a leading cause of vision loss worldwide, affecting as many as 1.75 million people in the United States by 2020.

What causes wet AMD?

Wet AMD is caused by an excess of the protein VEGF-A. Too much VEGF-A causes the growth of abnormal blood vessels. The abnormal blood vessels leak fluid, which builds up in the retina, found in the back of the eye.

Measuring disease progression

Wet AMD requires close monitoring to assess disease progression for each individual patient.

Physicians use an imaging method called optical coherence tomography, or OCT. These noninvasive scans show fluid in and under the retina and allow physicians to measure the thickness, since increases in thickness may signal fluid and swelling.

Understanding fluid terminology in wet AMD

Fluid can be found in three different layers of the retina, resulting in intraretinal fluid (IRF), subretinal fluid (SRF) and subretinal pigment epithelium (sub-RPE) fluid. The presence of some or all of these fluid layers swells the retina, making it thicker. Physicians can detect this swelling by measuring central subfield thickness (CST) – typically with an OCT scan.

Artistic rendering of an OCT scan of a normal retina

Artistic rendering of an OCT scan of a wet AMD patient's retina

Fluid in and under the retina can be present in one or more of these three layers. The presence of fluid can be an indication of disease activity. No fluid is present in the retina. CST is normal. The presence of fluid is one indication of disease activity. CST is increased.

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